

CONCLUSION

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

Respectfully submitted,

Date: 4/25/2001



Kenneth Q. Lao
Attorney for the Applicant
Registration No. 40,061

WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
Bradford Green, Building Five
755 Main Street, P.O. Box 224
Monroe, CT 06468
Telephone (203) 261-1234
Facsimile: (203) 261-5676
USPTO Customer No. 004955



Attorney Docket No. 890-004.002
Serial No. 09/478,677

with markings to show changes made

On page 2, starting at line 13, please amend the paragraph as follows:

According to the above objects, the motor drives the transmission shaft to rotate and, via the thread rods, the left and right seat bodies of the blade turning unit are respectively synchronously moved along the linear slide bars and the guide rails of the linear slide bar seats. A guide wheel and a blade seat pulley respectively disposed on the two seat bodies are also synchronously moved along therewith to keep the working section of the blade strip moving up and down in a horizontal state or left and right in a vertical state. A blade strip deflection rectifying mechanism is able to automatically detect and rectify the deflection of the blade strip. The working [bench]surface is reciprocally linearly moved back and forth, and the positions of the foam sponge and blade strip on the plane are adjusted by means of numeral control so as to cut the foam sponge into products with various irregular or curved shapes. A pneumatic cylinder serves to push the guide wheel to loosen the blade strip for easy replacement thereof. Therefore, the horizontal and vertical cutting operations are facilitated and stabilized and the power consumption is reduced, and thus the cost is lowered.

On page 3, line 6, please amend the paragraph as follows:

Fig. 3 is a side view of the working [bench]surface of the present invention;

On page 3, line 15, please add:

Figure 9 illustrates the present invention, wherein both the horizontal and vertical cutting devices are shown.

On page 3, starting at line 18, please amend the paragraph as follows:

Please refer to Figs. 1 to 3. The present invention includes an apparatus body 10 and a blade strip frame 20. A working [bench]surface 11 is mounted on the apparatus body 10. A motor 13 is disposed under the working [bench]surface 11 and fitted with a toothed belt and wheel assembly 14. Two ends of each of the front and rear sections of

the working [bench]surface 11 are disposed with roller shafts 12. The blade strip frame 20 is disposed with a horizontal cutting device 16. The left column of the horizontal cutting device 16 is disposed with a linear slide bar 22. A thread rod 31 is underlaid on the lower side of the slide bar 22. A guide rail 21 is disposed on the right side of slide bar 22 of the left column. The right column is disposed with two slide bars 22. A thread rod 31 is underlaid on the lower side of each of the slide bars 22.

On page 3, starting at line 29, please amend the paragraph as follows:

A left blade turning unit 32 includes a left blade seat 33 and a right blade turning unit 32 includes a right blade [seats]seat 33. The right blade seat is hung on the slide bar 22, and the left blade seat is hung on the guide rail 21 and connected with the slide bar 22 on the left side.

On page 4, starting at line 1, please amend the paragraph as follows:

Referring to Figs. 2 and 4, a blade strip deflection rectifying mechanism 50 is disposed on the blade turning unit 32. The blade holder 51 at the front end is integrally connected with a first positive gear 52 for clamping a blade strip 90. Two [ends]gear teeth sections of the first positive gear 52 are respectively engaged with two positive gears 53, 58. A spiral rod 54 is engaged with the upper side of the second positive gear 53 and a slide block 55 is disposed on the spiral rod 54. A detector unit 56 is positioned beside the slide block 55, including an upper detector A and a lower detector B. A third positive gear 58 is disposed at the output shaft of a servomotor 57. As shown in Figs. 4 and 5, when the blade face of the blade strip is turned by a certain angle, the blade holder 51 is also turned by a certain angle to make the first positive gear 52 rotate and indirectly drive the adjacent second positive gear 53 and the spiral rod 54 to rotate. Accordingly, the slide block 55 is vertically moved. When the turning angle of the blade strip 90 is responsive to the vertical moving height of the slide block and exceeds the allowed limit of the upper detector A or lower detector B, the detector unit 56 will detect this and immediately activate the servo motor 57 to operate forward or backward

in time for driving the third positive gear 58 to rotate and drive the first positive gear 52 to rotate. Accordingly, the blade holder 51 can carry the blade strip 90 and rectify the deflection to a correct angle. Therefore, the detector unit is a safety device for automatically sensing and automatically rectifying the deflection.

On page 5, starting at line 28, please amend the paragraph as follows:

When the motor drives the driving wheel 41 to rotate, the blade strip 90 revolves continuously by means of the transmission of a guide wheel unit 40 so as to provide a cutting effect on the working [bench]surface 11.

On page 5, starting at line 32, please amend the paragraph as follows:

The pneumatic cylinder 48 pushes and displaces the second guide wheel 45 to change the circularly [close]closed winding space of the blade strip so as to loosen the blade strip 90 for easy replacement thereof.

On page 6, starting at line 4, please amend the paragraph as follows:

In addition to the above horizontal cutting device 16, the other side of the blade strip frame 20 can be disposed with a vertical cutting device 17. The components of the vertical cutting device 17 are similar to those of the horizontal cutting device, while the guide wheel unit is installed in an altered direction. Therefore, one single cutting apparatus can provide both vertical and horizontal cutting functions. Such a cutting apparatus is shown in Figure 9.

On page 6, starting at line 21, please amend the paragraph as follows:

Referring to Fig. 7, the foam sponge 80 is placed on the working [bench]surface 11 for a horizontally cutting operation, and then the horizontal cutting device 16 is activated. The working [bench is reciprocally linearly]surface can be moved back and forth so as to cut the foam sponge along various irregular or curved cutting line 81 in a horizontal direction. The travel of the blade strip 90 depends on the change of the

position of the wheels of the guide wheel unit 40, [whereby the driving power consumption is reduced so that the present invention can be easily and conveniently operated and is able to achieve a stable cutting effect. Therefore, the power consumption is reduced and the cost is lowered].

On page 6, starting at line 31, please amend the paragraph as follows:

Referring to Fig. 8, the foam sponge 80 is placed on the working [bench]surface 11 for a vertically cutting operation, and then the vertical cutting device 17 is activated to similarly cut the foam sponge along various irregular or curved cutting lines in a vertical direction. Therefore, both vertical and horizontal cutting operations can be performed on one single working [bench]surface. [This reduces the space occupied by the equipment and indirectly lowers the cost.]

On page 7, starting at line 6, please amend the paragraph as follows:

However, since both the vertical and horizontal cutting devices use the working [bench]surface, when using the horizontal cutting device 16, the vertical cutting device 17 should be shifted to [the rear end of the travel]one side to ensure safety. Both the vertical cutting device 17 having a blade strip 90', and the horizontal cutting device 16 having a blade strip 90 are shown in Figure 9.

On page 7, starting at line 13, please amend the paragraph as follows:

1. The blade strip can be moved up and down in a horizontal state and the working [bench]surface is able to move the work piece so that the foam sponge can be cut into products with various irregular or curved shapes in a horizontal direction. Therefore, the cutting operation is facilitated and stabilized.